

Effect of acupressure on Pain in Leukemia Patients: A Randomized Controlled Trial study

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Introduction: Based on databases, there is no study was done to investigate the effect of acupressure on pain of cancer patients. So this study aimed to determine the effect of acupressure on pain in leukemia patients.

Methods: This single-blind randomized controlled trial study, was conducted on hospitalized leukemia patients in Imam Khomeini hospital in Tehran. Among 163 leukemia patients, according to inclusion criteria (such as being 18 years old and higher and no other specific background disease), 100 patients selected to participate in the study divided into two groups of 50. Acupressure intervention was done by specialist on patients in intervention group for 12 sessions. The control group patients received no intervention more than the usual treatment. In order to measure the level of pain before and after treatment in both groups, Visual Analogue Scale (VAS) was used. A mixed analysis of variance (ANOVA) was conducted to examine the effect of the acupressure method on participants' pain. The mixed between-within subjects ANOVA compares the mean differences of pain between groups that have been split on (i) pre-test and post-test as within subjects and (ii) control and experimental group as between subjects.

Results: The results show that there is a significant interaction between group and time, Wilk Lambda = .372, $F(1, 98) = 165.184$, $p < .001$. The effect size using eta-squared (η^2) was .628, a very large effect size. This indicates that the groups had significantly different changes from pre-test to post-test. Moreover, the main effect comparing control group and experimental group is significant, $F(1, 98) = 14.543$, $p < .001$, suggesting the effectiveness of the acupressure method in reducing pain.

Conclusion: The results of current study shows that acupressure have a proper effect on pain in leukemia patients. It is recommended that more detailed studies of this kind should be implemented in the future.

Keywords: leukemia, pain, acupressure